

# **INTEGRATED COASTAL RESOURCE MANAGEMENT PLAN (ICRMP) for PUJADA BAY**

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## MAJOR ISSUES AND PROBLEMS

### *Overfishing*

- Total fishing effort going 3 times over the maximum sustainable level
- Commercial fishing encroachment within the island municipality boundary depriving small fishers sustainable livelihood from fishing

### *Destruction of coastal habitats*

- Mangroves being rapidly depleted due to harvesting for charcoal-making and conversion into aquaculture ponds, settlements and urban sites
- Only about 180 hectares of natural mangrove forests remain, and 220 hectares mangrove plantation recently established.
- Destruction and degradation of coral reefs largely due to dynamite fishing, muro ami, use of beach seine and cyanide.
- The abundance of seagrass explains the presence of sea turtles, reported sighting of sea cow by local fishermen.

### *Water Pollution*

- domestic wastes, effluent and sewage from urban centers (Barangay Central and Matiao) have considerably contributed to high nutrient loading a coliform counts of waters near urban areas

### *Tourism Related Problems*

- tourism development plan of the owners of Pujada Island is already in conflict with the effort of municipal government of Mati to establish fish sanctuary

### *Legal and Institutional Issues*

- vague delineation of responsibilities
  - CRM policies and roles of national and local are not clear among participants
  - not effective at managing jurisdictional coastal areas
  - lack of participation and mechanisms for mobilizing broad sectors of coastal communities
  - lack of political will
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## THE ICRM PLAN

### *General Management and Principles and Guidelines*

- The management of the bay shall be guided by the NIPAS Act of 1992 or R.A. No. 7586.
- Effective management of the bay shall require the active participation of all affected resource users and their sustained cooperation and support is essential to long-term goal.
- Coordination and cooperation among municipal, provincial, regional and national government agencies and the public is crucial to the successful implementation of the management plan.
- Management will be a continuing effort. Management strategies and actions will be evaluated and revised as necessary for best management results.
- When the utilization of the bay and its resource values conflicts with the protection and enhancement of these resource values the protection and enhancement of resource values should prevail.
- The active participation and involvement of NGOs and civic/religious organizations is crucial in the successful implementation of the management strategies and actions.
- Active participation and involvement of the community is crucial in the planning and implementation of CRM plans.
- LGUs are not yet effective at managing their jurisdictional areas for coastal resources under the local government agencies.
- Ineffective implementation of laws, rules, and regulations both in the utilization and management of coastal resources and controlling industrial and domestic pollution.
- Market failures and slow economic development in coastal areas perpetuate poverty and increase pressure on fishery and other resources of the bay.
- Low productivity and loss of marine and coastal biodiversity resulting from habitat destruction, pollution and over-exploitation.
- Human resources to plan and implement CRM plans are not sufficiently developed.

### *Goal of the Plan*

- To promote the sustainable development of Pujada Bay protected landscape/seascape through integrated/holistic and multi-sectoral coastal resources management consistent with the Philippine Strategy for Sustainable Development and Community Based Management (E.O. No. 263 dated July 19,1995).
- Promote the social well-being of the people supported by strong ECONOMY and SUSTAINED by a healthy ENVIRONMENT.

### *Key Management Issues*

- ineffective implementation of laws, rules and regulations

- open access system causes over exploitation of most bay's resources
- human resources to plan and implement CRM plans and host sufficiently developed
- CRM policies and the roles of the various national and local agencies involved are not clear among all participants in CRM planning and implementation.
- *De facto* open access system causes over exploitation of most of the bay's resources.

### ***Specific Management Objectives***

- To identify and develop strategies for management of each zone
- To rehabilitate degraded ecosystems/critical habitats
- To intensify information, education and communication campaign
- To identify and develop alternative livelihood activities for fishing families
- To rehabilitate degraded ecosystem/critical habitats
- To promote and develop eco-tourism potential of the bay
- To facilitate local coastal resources management institutionalization and implementation.
- To develop effective waste management for urban and urbanizing areas along the bay's coastline.
- To intensify information, education, communication campaign
- To enhance and strengthened coordination among municipal, provincial, regional and national government agencies in coastal resource management.
- To enlist the active participation, support and involvement of NGOs, Pos, civic/religious organizations and the private sectors in coastal resource management
- To undertake researches that will serve as useful inputs for management decisions.
- To identify appropriate resource uses for the bay through coastal and zoning and develop strategy for the management of each zone through participative and multisectoral planning and plan implementation.
- To organize municipal fishermen into associations/cooperatives and train them in community-based coastal resources management.
- To identify and develop alternative livelihood activities for fishing families
- To establish fish sanctuaries to cover an area of at least 10% of the total area of the Pujada Bay Protected Seascape.
- To promote the application of soil and water conservation measures in the upland farming systems.

### ***Management Strategies and Actions***

#### **Coastal Area Zonation**

- Strict Protection Zone* -- areas with high biodiversity value and shall be closed to all human activity except for scientific studies and ceremonial by indigenous communities
- Restoration zone* -- to restore natural habitat with its associated biodiversity and to return the area to more strict protection level
- Multiple Use Zone* -- areas where settlement, traditional and sustainable land use
- Buffer Zone* -- areas outside the protected area but adjoining it that are established by law under the control of DENR
- Recreational Zone* -- areas high in recreational tourism, educational, environmental awareness values
- Industrial Zone* -- areas where commercial and Industrial establishment are allowed
- Sustainable Land Use* -- Natural areas where the habitat and its associated biodiversity shall be conserved

#### **Constituency Building**

It has been the experience and learning of previous programs that the active participation and involvement of the community, especially the direct stakeholders of any resource to be managed, is crucial in the development process.

### **Research**

Research shall be a continuing activity in the plan. Findings and results of researches shall become the bases for the formation of management and strategies.

Recommended management actions:

- Community organizing
- Public information, education and communication programs
- Public participation and involvement in planning and implementation of plans

### **Plan Implementation**

- Institutional arrangements
- Budgetary requirements
- Monitoring and evaluation

### **Coral Reef Protection and Management**

- Providing relevant government agencies with more manpower and equipment
- Promoting interagency cooperation
- Revising unclear and outdated laws and regulations and adopting new ones
- Enhancing local participation in coral reef management

Recommended actions for the protection and rehabilitation of coral reefs:

- Establishment of Fish Sanctuaries
- Prevention and Control of Soil Erosion
- Prohibition of Coral Collection
- Establishment of Permanent Mooring in Strategic Places

### **Mangrove Forest Management and Development**

- Rehabilitation of degraded mangrove areas

Recommended actions for mangrove management and development:

- Enforcement of rules and regulations pertaining to mangrove forest protection
- Preparation of community-based mangrove resource management plan
- Rehabilitation/reforestation of degraded mangrove areas
- Identification of alternative livelihood projects
- Establishment of mangrove reservation
- Non-conversion of existing mangrove forest into other uses

### **Water Quality and Land Use Management**

Management of water quality should take into account the land use pattern surrounding Pujada Bay

Recommended actions for water quality management:

- Classification of all rivers/creeks that drain in Pujada bay
- Coastal waters - a similar system of comparing existing water quality to beneficial uses can be used in the marine waters along the coast of Pujada Bay

### **Fisheries Management**

Policies and plans should discourage the over exploitation and inappropriate utilization of marine fisheries resources, and reduce conflicts among different fisheries practices to better utilize the bay as fishing ground and aquaculture areas.

Recommended fishery management activities:

- Enforcement of Fishery Laws and Regulations -- strict enforcement of all relevant laws, rules and regulations undertaken primarily by Provincial Inter-agency Task Force of Coastal Environment Protection created under Executive Order No. 117

- Implementation of Alternative Livelihood Project -- various alternative income generating activities which are sustainable and environment friendly will be introduced
- Reduction of Fishing Effort -- local ordinance should be enacted
- License limitation scheme

### **Habitat Protection/Rehabilitation**

Rehabilitation of degraded habitats, particularly the mangrove forest as part of fishery management activities

### **Management Plan for Tourism Development**

Tourism development should be carefully and sustainably managed to ensure consistent financial returns for the private developer and the LGU, while protecting the very resources that are being developed and utilized. The tourism management plan will provide general management guidelines and specific action for areas proposed and currently developed for tourism:

**Solid waste management.** Each tourist facility should provide adequate garbage containers and have a regular collection system

**Groundwater supply.** Evaluation of groundwater supply should be undertaken prior to development, especially in rural areas and on islands

**Involvement of local population.** Tourism development should always benefit the local population.

**Protected areas.** Tourist operation should not have adverse impact on the protected area's environment and only compatible tourist should be allowed.

**Education and interpretation.** All tourist developments should be required to present educational expenses geared towards the decision makers, the local population and the visitors (interpretative trails, exhibits and visitor centers)

**Carrying capacity.** Carrying capacity of isolated discrete areas, such as islands or sites adjacent to protected area, should be assured as part of the evaluation exercise for any development proposal

**Tourism Development (Limitation) Zones.** Within each tourism zone, specific activities shall be identified in accordance to its appropriateness for any of the different scales of development such as: large-scale resorts, medium-scale tourist accommodation and small-scale community accommodations.

Recommended actions for tourism development

1. *Siting, design and construction of facilities* -- Soil erosion control measures should be implemented to reduce the loss of topsoil and run-off in waterways during construction
2. *Set-back* -- Development along beaches, a minimum of 60 meters from the mean high water line should be required. Development next to mangroves, a construction setback of 400 meters from the mangrove's edge is recommended
3. *Sewage waste disposal* -- Adequate measures for sewage waste disposal in all tourism developments
4. *Construction of ports* -- Construction of ports and any dredging of the seabed should only be done if there are- accompanying measures to reduce the resulting water turbidity
5. *Water quality* -- Developments adjacent to recreational areas should be evaluated on the basis of their cumulative impacts on the water quality